

Chickamauga Lock Project Update Inland Waterways Users Board

Mr. Adam Walker
Project Manager
Nashville District
Great Lakes and Ohio River Division
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Chickamauga Lock Replacement

- **Bottom Line Up Front**
 - ▶ **Lock Excavation Construction**
 - Rock Excavation On-going.
 - ▶ **Lock Chamber Construction**
 - Batch Plant Construction Proceeding Well
 - ▶ **Total Project Cost Estimate certified June 2018.**
 - \$757.7M (Fully Funded, Oct 2017 Price Level assuming Dec 2024 completion).
 - Includes \$91 million in contingency.
 - ▶ **Post Authorization Change Report approved by HQ 19 July 2018.**

CHICKAMAUGA LOCK PROJECT OVERVIEW

Road & Bridges - \$6M
Completed Feb 2007

Site Restoration
Award scheduled: Sep '23

Approach Walls & Decommissioning
Award scheduled: Sep '21

Contract Legend

Completed

Current

Future

Lock & Associated Facilities \$752M
Road and Bridges 6M
Total \$758M (Oct '17 P.L.)
\$234.5M Expended thru Jun 2018 = 31% completed

Bridge Fabrication - \$400K
Completed June 2011

Gates & Valves - \$17M
Awarded Sep 2009, Comp 2012

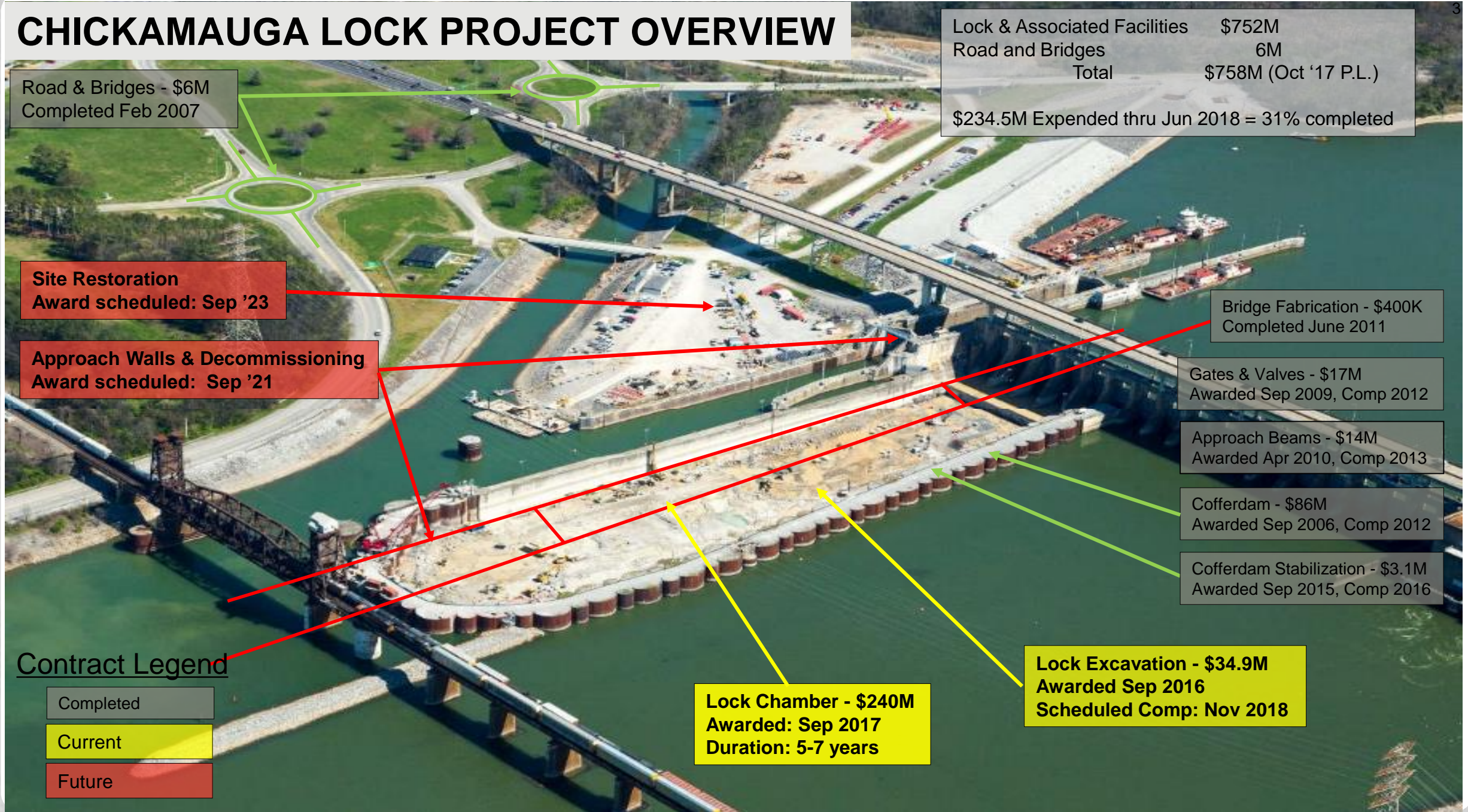
Approach Beams - \$14M
Awarded Apr 2010, Comp 2013

Cofferdam - \$86M
Awarded Sep 2006, Comp 2012

Cofferdam Stabilization - \$3.1M
Awarded Sep 2015, Comp 2016

Lock Chamber - \$240M
Awarded: Sep 2017
Duration: 5-7 years

Lock Excavation - \$34.9M
Awarded Sep 2016
Scheduled Comp: Nov 2018



Lock Excavation Contract – 18 July 2018

- Contract Award Sep 2016 – \$34.9M
- Scheduled completion date - Nov 2018



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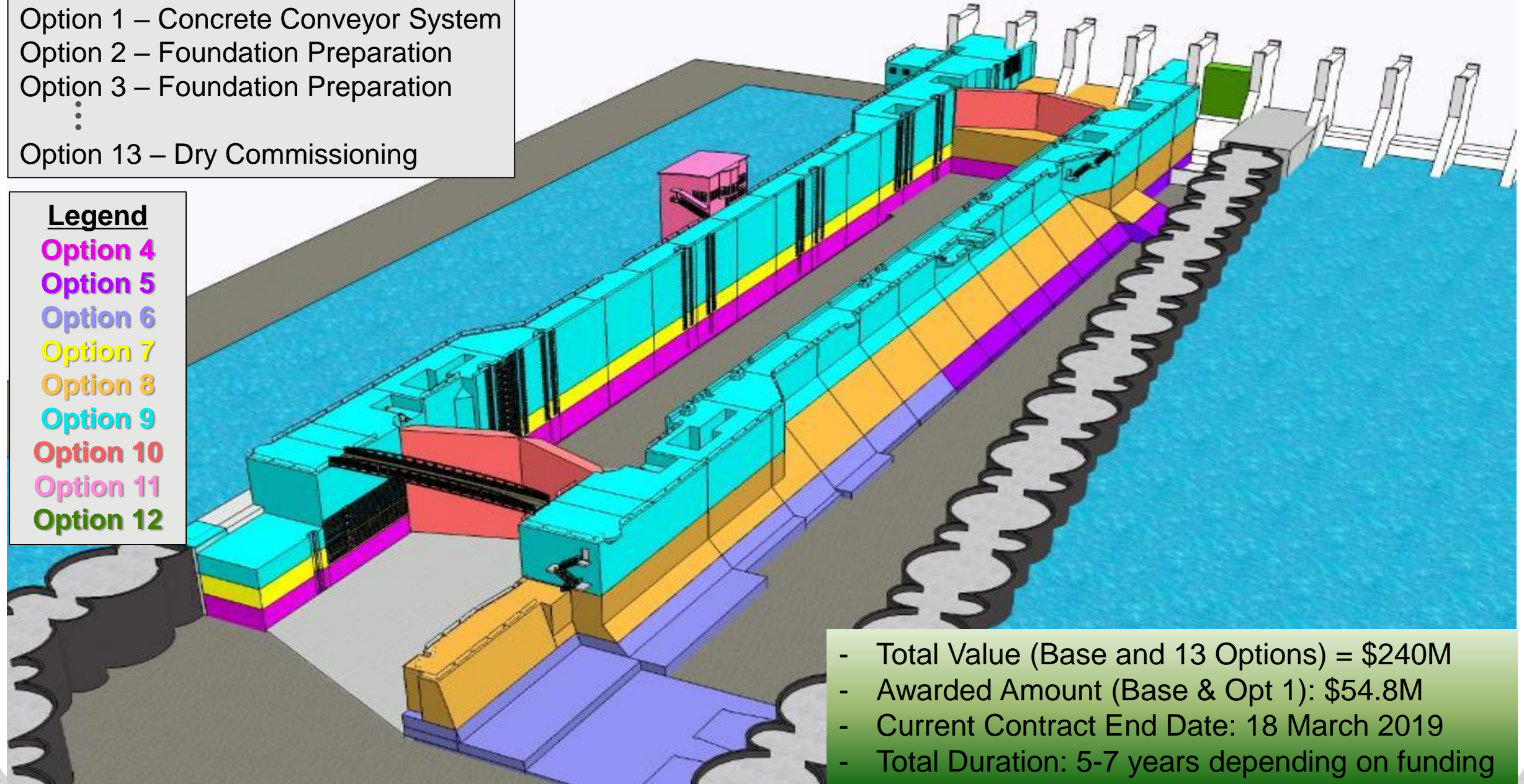


Lock Chamber Construction Contract

Option 1 – Concrete Conveyor System
Option 2 – Foundation Preparation
Option 3 – Foundation Preparation
⋮
Option 13 – Dry Commissioning

Legend

Option 4
Option 5
Option 6
Option 7
Option 8
Option 9
Option 10
Option 11
Option 12



- Total Value (Base and 13 Options) = \$240M
- Awarded Amount (Base & Opt 1): \$54.8M
- Current Contract End Date: 18 March 2019
- Total Duration: 5-7 years depending on funding

Lock Chamber Contract – 25 July 2018

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Total Project Cost Estimate

(Certified 21 June 2018, FY18 Price Level)

Feature Code & Description	Spent Cost Thru 9/30/2017 (\$K)	Remaining Cost (\$K)	Contingency Amount (\$K)	Fully Funded Amount (\$K)	Change in Fully Funded Amount Since 2016 ¹ (\$K)
02 – Relocations	\$5,885	\$0	\$0	\$5,885	\$0
05 – Locks	\$131,234	\$424,244	\$81,735	\$637,213	-\$238
06 – Fish & Wildlife Facilities	\$0	\$568	\$171	\$739	-\$105
19 – Buildings, Grounds & Utilities	\$3	\$2,119	\$636	\$2,758	-\$9,403
01 – Lands and Damages	\$327	\$0	\$0	\$327	\$0
30 – Planning, Engineering & Design	\$54,211	\$10,930	\$2,464	\$67,605	\$12,379
31 – Construction Management	\$7,398	\$29,759	\$5,983	\$43,140	\$356
Total	\$199,058	\$467,621	\$90,988	\$757,666	\$2,988

¹ Amounts do not factor in the price level change from Oct 2017 to Oct 2018.

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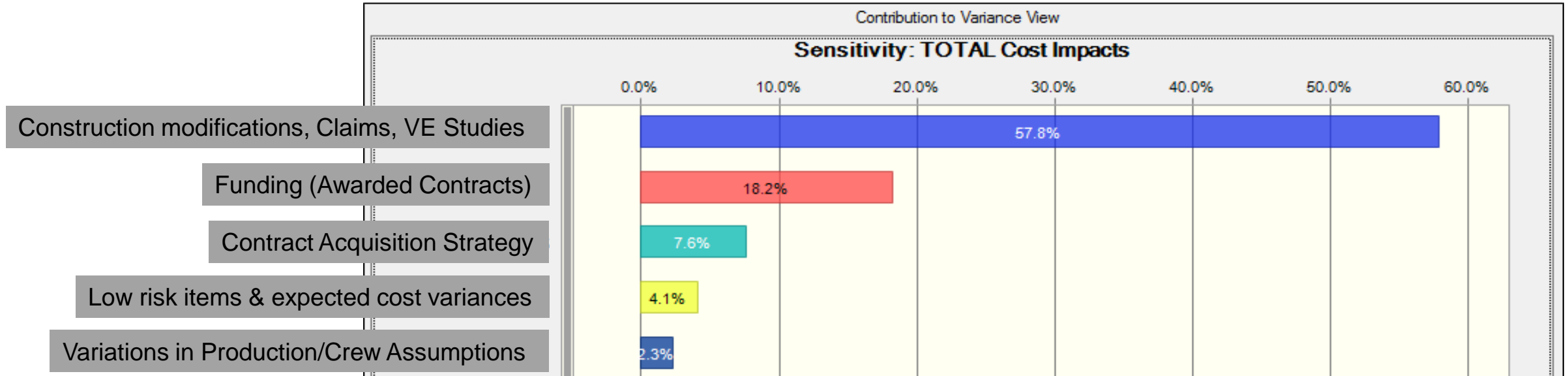
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2018 Total Project Cost Estimate – Cost Sensitivity

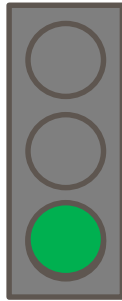


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File Name



Chickamauga Lock Project Time and Cost Scorecard



Expenditures	30 June
Planned (BCWS)	\$235.8M
Earned (BCWP)	\$235.9M
Actual (ACWP)	\$234.5M

BCWP: Reports the value (based on % complete) of the work performed to date.

Target:

Actual as compared to Planned: (<1% = Green) (>1%and <3% = Yellow) and (>3% = Red)

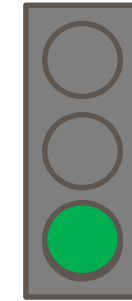
Schedule 30 June

(Baseline)/(Current)

Project Complete	May 2028 / Dec 2024
Lock Operational	Nov 2027 / Sept 2023

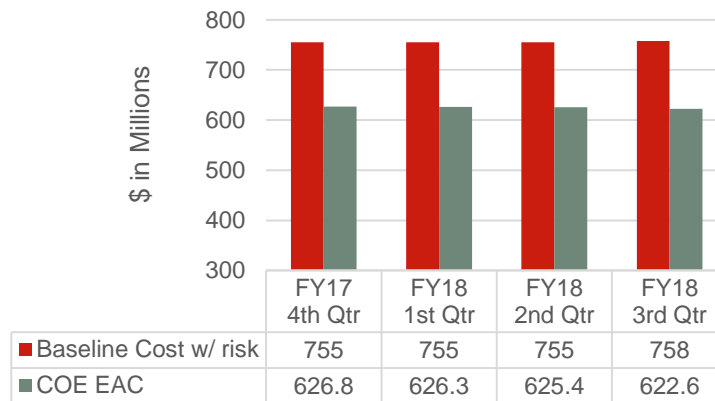
Measures: Planned project completion and Lock operational dates

Target: PACR Anticipated in FY18.



Budget

Chickamauga Project EAC Trend

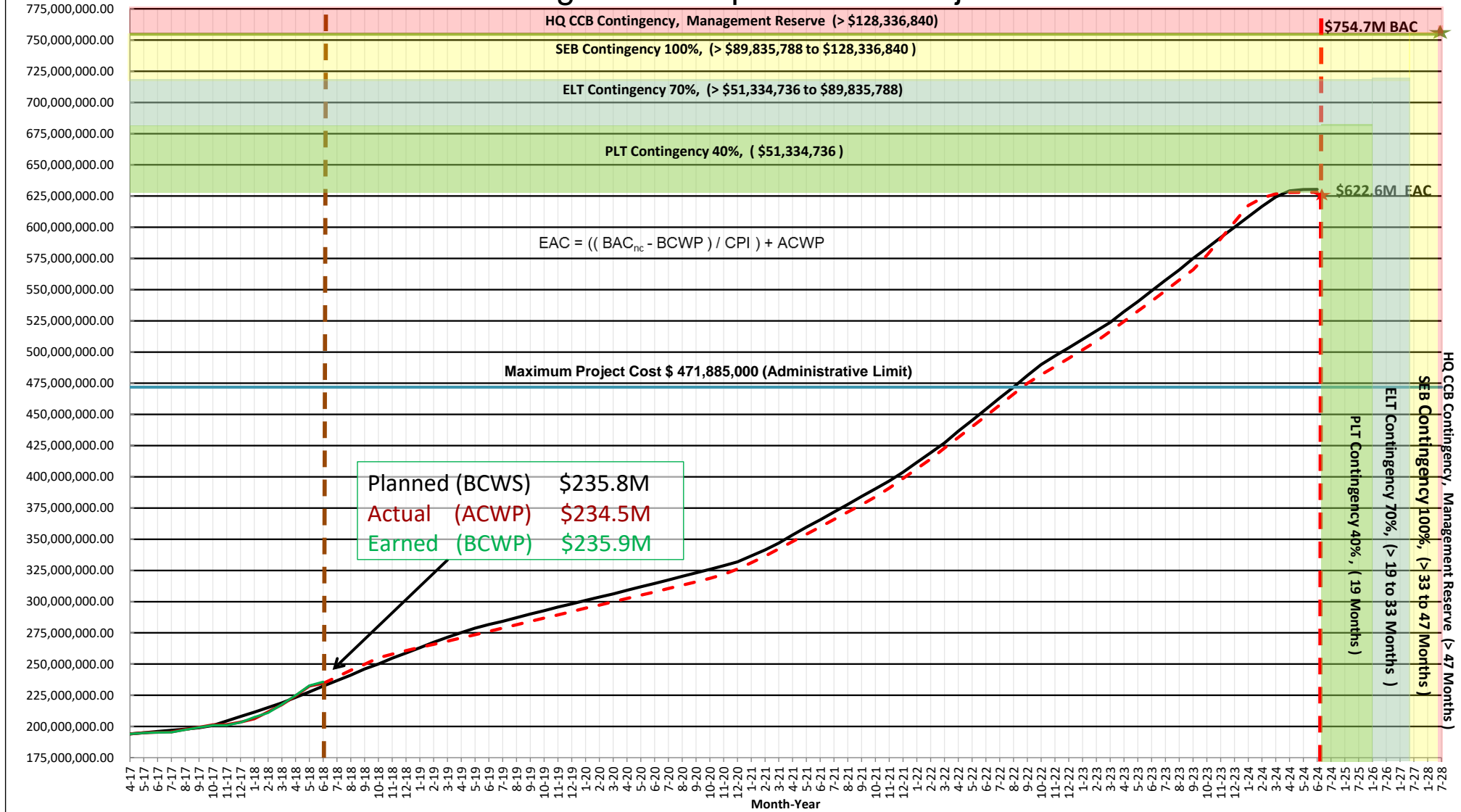


Major Activity Schedule

Activity	Baseline	Current
Update Risk Based Certified Cost Estimate	June 2018	21 June 2018 (A)
PACR Approved by HQ	-	19 July 2018 (A)
Lock Excavation – Contract Complete	2 Nov 2018	6 Nov 2018
Lock Chamber – Base & Opt 1: Contract Completion Date	18 Mar 2019	18 Mar 2019

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Chickamauga Lock Replacement Project S Curve



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Chickamauga Lock Project Schedule

Major Project Activity	Start/Award	Complete ²
Lock Excavation Construction Contract	Sep 2016	Nov 2018
Lock Chamber Construction Contract	Sep 2017	May 2023
Approach Walls & Decommission Contract	Sep 2021	Dec 2024
Site Restoration Contract	Sep 2023	Dec 2024
Updated Certified Total Project Cost Estimate	N/A	21 June 2018 (A)
PACR for 902 Exceedance ¹	N/A	19 July 2018 (A)

Note: Red indicates revised date from previously report.

¹ 902 Exceedance expected by FY2020 with efficient funding.

² Assumes no risk. 80% confidence schedule adds 25 months to project completion date.

Chickamauga Lock Summary and Challenges

- Lock Excavation contract is progressing, but carries high risk due to site geology.
- Lock Chamber contract ramping up.
 - **Efficient annual funding is CRITICAL** in FY19 and beyond to maintain viable Lock Chamber contract.
- **Post Authorization Change Report approved by HQ USACE 19 July 2018.**
 - Congress notified of HQ approval for potential inclusion in WRDA 18.
 - ASA(CW) and OMB approval TBD.
 - Total Project Cost Estimate projected to exceed 902 Limit in FY2020 with efficient annual funding.